

What is claimed is:

1. A method of making organic light emitting pixels having red, green, and blue subpixels on a display panel comprising:
  - 5 for each pixel depositing a hole transporting layer and an electron transporting layer; and
  - depositing red, green, and blue dopants simultaneously in a host layer such that the blue dopant is deposited on the blue subpixel and at least one of the red and green subpixels.
- 10 2. The method of claim 1 wherein the host layer is the hole transporting layer.
- 15 3. The method of claim 1 wherein the host layer is the electron transporting layer.
4. The method of claim 1 wherein the host layer is a layer between the hole transporting layer and electron transporting layer.
- 20 5. The method of claim 1 wherein a shadow mask is used during the deposition process.
6. The method of claim 5 wherein the mask is removable.
- 25 7. The method of claim 6 wherein the removable mask is reusable.
8. The method of claim 6 wherein the mask comprises crystalline material, metal, or polymer.
- 30 9. The method of claim 8 wherein the crystalline material is silicon.

10. The method of claim 5 wherein the mask is integrated with the display panel.

11. The method of claim 10 wherein the integrated mask comprises  
5 photoresist.

12. The method of claim 5 wherein the red and green dopant sources are located on opposite sides of the display at an angle of about 20° to about 70° from the pixel surfaces and the blue dopant source and other sources are located in a plane that bisects the display panel substrate and is normal to a straight line connecting the red 10 and green dopant sources.

13. The method of claim 12 wherein the angle is about 40°.

15 14. The method of claim 1 wherein the deposition paths of the red and green dopants are shielded from each other and the other sources wherein the shielding starts at the red and green dopant sources and extends some distance toward the pixel.

20 15. A method of correcting for parallax in the making of an organic light emitting display panel comprising using line-of-sight vapor deposition to create a series of adjacent pixels, each pixel comprising sub-pixels, wherein one or more source is positioned at an angle of about 20° to about 70° from the pixel surfaces and wherein a shadow mask is used in the deposition process, the mask having slots defined by ribs wherein the pitch of the ribs is smaller than the pitch of the pixels.

25 16. The method of claim 15 wherein the angle of at least one or more source is about 40°.

17. The method of claim 15 wherein the mask is removable.

30 18. The method of claim 17 wherein the mask is reusable.

19. The method of claim 15 wherein the mask comprises crystalline material, metal, or polymer.

20. The method of claim 15 wherein the crystalline material is the silicon.

5 21. The method of claim 15 wherein the mask is integrated with the display panel.

22. The method of claim 21 wherein the mask comprises photoresist.

10 23. An article comprising an organic light emitting full color display panel wherein a blue dopant is dispersed in at least one non-blue sub-pixel.

15 24. The article of claim 23 wherein the blue dopant is dispersed in an electron transporting layer.

20 25. The article of claim 23 wherein the blue dopant is dispersed in a hole transporting layer.

26. The article of claim 23 wherein the blue dopant is dispersed in a host layer between an electron transporting layer and a hole transporting layer.

27. The article of claim 23 wherein a mask is integrated with the display device.

25 28. The article of claim 27 wherein the mask comprises photoresist.

29. The article of claim 28 wherein the photoresist is a dry film photoresist.

30 30. An organic light emitting color display panel comprising: a plurality of full color pixels formed on a substrate, each full color pixel comprising a red, a green, and a blue subpixel,

an integrated shadow mask that corrects for parallax, for forming the full color pixels, comprising a plurality of ribs erected on the substrate, wherein the pitch of the ribs is smaller than the pitch of the pixels.

5 31. The display panel of claim 30 wherein the mask comprises photoresist material.

10 32. The display panel of claim 31 wherein the photoresist comprises dry film photoresist.

15 33. A removable mask for making an organic light emitting full color display panel by angled evaporation, the mask comprising a series of ribs that define slots in which individual pixels are built.

20 34. The mask of claim 33 wherein the height of the ribs is approximately equal to the width of the pixels of the display panel.

35. The mask of claim 33 wherein the mask comprises crystalline material, metal, or polymer.

25 36. The mask of claim 35 wherein the crystalline material is the silicon.

37. The mask of claim 33 wherein the pitch of the ribs is smaller than the pitch of the pixels for which the mask will be used.